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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,641	12/22/2003	Chen-Chung S. Chang	048502.017CIP1	7411

25461 7590 01/26/2009

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EXAMINER	
MCNEIL, JENNIFER C	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
01/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,641	CHANG ET AL.	
	Examiner	Art Unit	
	JENNIFER MCNEIL	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 30-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *31-33* is/are allowed.

6)☒ Claim(s) *1-18,30,34-46,49,50,53-55* is/are rejected.

7)☒ Claim(s) *47,48,51 and 52* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The indicated allowability of claims 31-33 is withdrawn in view of the reconsideration of Ryan and the new reference to Mizuhara. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-18, 30-36, 43, 46, 49-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Some of the claims have been amended to recite "in the absence of heat treatment". This appears to be an attempt to clarify "without any intermediate heat treatment" which was the subject of the previous 112 2nd paragraph rejection. However, claim 11 recites "without any intermediate heat treating; and the metallic bond is that which is formed by roll-bonding in the absence of heat treatment". It is not clear if "intermediate heat treatment" is something other than or in addition to "in the absence of heat treatment". Since both "intermediate" and "absence of heat treatment" are recited by the instant claims, it appears that the two are not equated. Claim 13 depends from claim 11, and further recites "wherein a thickness of said strip or foil is reduced by cold rolling without any intermediate heat treating". Claim 11 previously states "roll bonding" without any intermediate heat treating. It is not clear if these are referring to the same type of "intermediate" heat treatment. Claim 14 has been amended to state "roll bonding in the absence of heat treatment". Claim 16 which depends from claim 14 refers to "roll bonding without any intermediate heat treating". Are these referring to the same heat treatment? The same is true for claim 18.

Regarding claims 31-33, it is not clear whether applicant is claiming the product as an intermediate or final product. The recitation of the thickness of the layers prior to rolling, and as roll bonded renders the claims indefinite as to what state the product is intended to be claimed. For examination purposes, it is considered to be post-rolled or after rolling has been performed.

As stated previously, it is not clear what is meant by intermediate heat treating. Does this mean treatment between layering steps? Please clarify.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirano et al. USP 5,028,495 for the reasons of record in the Office Action mailed on 27 June 2007.

3. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Jha et al. USP 5,553,770 for the reasons of record in the Office Action mailed on 27 June 2007.

4. Claims 1-3, 7, 8, 10-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Mennucci USP 5,761,799 for the reasons of record in the Office Action mailed on 27 June 2007.

5. Claims 1, 4, 5, 10, 11-16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Galasso et al. USPN 4,034,454 for the reasons of record in the Office Action mailed on 27 June 2007.

6. Claims 1-18, 34-46, 49, 50, and 53-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirano et al. JP 4-006173 for the reasons of record in the Office Action mailed on 27 June 2007.

7. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by Ryan (US 4,725,509). Ryan teaches Ni/Cu/Ti/Cu/Ni where Ti is considered to have a metallic bond with the Cu layers. The recitation of what the thickness is prior to rolling is not considered to limit the final product of the strip or foil. The recitation of "cold rolling" is considered a process limitation that does not structurally define over the prior art.

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hirano et al. USP 5,028,495 for the reasons of record in the Office Action mailed on 27 June 2007.

11. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jha et al. USP 5,553,770 for the reasons of record in the Office Action mailed on 27 June 2007.

12. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Galasso et al. USPN 4,034,454 for the reasons of record in the Office Action mailed on 27 June 2007.

13. Claims 1-30, 34-46, 49, 50, and 53-55 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hirano et al. JP 4-006173 for the reasons of record in the Office Action mailed on 27 June 2007.

Claim Rejections - 35 USC § 103

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan (US 4,725,509). Ryan teaches a braze strip or foil as discussed above but does not teach a thickness of a first and second layer of 0.012 inches thick (0.03 cm). Ryan teaches that depending upon the use of the filler metal, the thickness may be adjusted. For instance, in applications which utilize braze wire, the nominal thickness of the wire is about 0.05-0.125 cm, for braze foils, the thickness may be thinner. It would been obvious to one of ordinary skill to adjust the thickness of the braze material based upon the intended use of the braze as Ryan clearly teaches that one of ordinary skill in the art recognizes these engineering choices (col. 3, lines 18-35).

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan (US 4,725,509) in view of Mizuhara (US 3,652,237). Ryan teaches the braze strip or foil as discussed above but does not specify a composition of 15Cu-15Ni-70Ti, but does state that the foil may be about 15-21 Cu, 24-30 Ni, and the balance Ti. Mizuhara teaches a braze material that may comprise 5-30 % Cu, 5-30% Ni, and 40-90% Ti, and is preferably 15Cu-15Ni-70Ti. It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the composition of braze alloy of Ryan depending upon the material the braze was intended for use with as Mizuhara clearly teaches that a range of Cu-Ni-Ti is useful for brazing, and 15Cu-15Ni-70Ti is particularly known as a useful brazing composition.

Response to Amendment

14. In view of applicant's amendments with regard to "commercial purity" the rejection with respect to 112 2nd paragraph in this regard are overcome and therefore withdrawn. Applicant's amendments regarding "absence of heat treatment" has raised the new issue of indefiniteness as addressed above. Applicant does not appear to have clarified what is intended by "intermediate heat treatment", and the addition of "absence" of any heat treatment in combination with the limitations of without an "intermediate" heat treatment have necessitated the new rejection above.

15. Regarding the art rejections, applicant argues that cold working or cold rolling generally result in a higher yield strength as a result of the increased number of dislocations and effect of sub-grains and decreased ductility. A statement of "general results" is not deemed a persuasive argument for showing that the products of the prior art are structurally different from that of the instant claims. As stated previously, it is not clear how the art of record results in a different product from

that of the instant claims. Furthermore, whether or not any subsequent heat treatment may be performed, at the point of the roll-bonding (or cold-rolling) step, a bond is expected to occur between the materials treated. Therefore, the bond that results from the rolling treatment step is done at that time without the presence of heat. In previous arguments applicant refers to benefits gained as well as comparing thicknesses of the strips or foils, none of which are commensurate with the claims.

16. It is noted that claims 37-40, 42, and 45 do not limit the claim with regard to any heat treatment or process.

Allowable Subject Matter

17. Claims 47 and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 51 and 52 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer McNeil whose telephone number is (571) 272-1540. The examiner can normally be reached on Monday through Friday.

19. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JENNIFER MCNEIL/

Supervisory Patent Examiner, Art Unit 1794